Nalco Docket No.: 7780-NES
Customer No. 000049459

CLAIMS

1. (currently amended) A paraffin inhibitor comprising a polymer consisting of

(a) about 1 to about 98 weight percent of one or more C_1-C_{30} alkyl esters of acrylic acid;

(b) about 1 to about 98 weight percent of one or more ~~C_1-C_{30}~~ C_6-C_{30} alkyl esters of methacrylic acid; and

(c) about 1 to about 30 weight percent of one or more unsaturated monomers selected from the group consisting of styrene, vinyl acetate, maleic anhydride, vinyl cyclohexane, vinyl propionate and cinnamic acid C_1-C_4 alkyl esters and wherein the alkyl ester portion of at least one of (a) or (b) is C_{10}-C_{30} alkyl.

2. (original) The paraffin inhibitor of claim 1 wherein the polymer has a number average molecular weight of about 1,000 to about 150,000 Daltons.

3. (canceled)

4. (cancelled)

5. (currently amended) The paraffin inhibitor of claim ~~2~~ 29 comprising about 65 to about 85 weight percent of a C_{16}-C_{24} alkyl ester of acrylic acid.

6. (currently amended) The paraffin inhibitor of claim ~~2~~ 29 comprising about 5 to about 15 weight percent of the C_1-C_{30} alkyl ester of methacrylic acid.

7. (previously presented) The paraffin inhibitor of claim 2 comprising about 5 to about 15 weight percent of a C_{10}-C_{30} alkyl ester of acrylic acid.

8. (previously presented) The paraffin inhibitor of claim 2 comprising about 5 to about 15 weight percent of the unsaturated monomer.

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9. (original) The paraffin inhibitor of claim 8 wherein the unsaturated monomer is styrene, vinyl acetate or maleic anhydride.

10. (original) The paraffin inhibitor of claim 8 having a number average molecular weight of about 10,000 to about 100,000 Daltons.

11. (previously presented) The paraffin inhibitor of claim 2 wherein the alkyl ester of acrylic acid is behenyl acrylate, the alkyl ester of methacrylic acid is lauryl methacrylate and the unsaturated monomer is styrene or vinyl acetate.

12. (previously presented) The paraffin inhibitor of claim 2 comprising about 5 to about 20 weight percent of the C_1-C_{30} alkyl ester of acrylic acid.

13. (previously presented) The paraffin inhibitor of claim 2 comprising about 5 to about 20 weight percent of a C_{16}-C_{24} alkyl ester of acrylic acid.

14. (currently amended) The paraffin inhibitor of claim 2 comprising about 70 to about 85 weight percent of the ~~C_1-C_{30}~~ $\underline{C_6\text{-}C_{30}}$ alkyl ester of methacrylic acid.

15. (previously presented) The paraffin inhibitor of claim 2 comprising about 70 to about 85 weight percent of a C_{10}-C_{16} alkyl ester of acrylic acid.

16. (previously presented) The paraffin inhibitor of claim 2 wherein the alkyl ester of acrylic acid is lauryl acrylate, the alkyl ester of methacrylic acid is behenyl methacrylate and the unsaturated monomer is vinyl acetate.

17. (original) A paraffin inhibitor composition comprising the polymer of claim 1 and one or more organic solvents.

18. (original) A paraffin inhibitor composition comprising the polymer of claim 1 dispersed in water.

19. (original) The paraffin inhibitor composition of claim 17 comprising about 1 to about 50 weight percent of the polymer of claim 1, based on polymer actives.

20. (original) The paraffin inhibitor composition of claim 17 comprising about 5 to about 30 weight percent of the polymer of claim 1, based on polymer actives.

21. (original) The paraffin inhibitor composition of claim 17 that is liquid at a temperature of 0 °C.

22. (original) A method of inhibiting the deposition of paraffin and improving the flow properties of oil comprising adding to the oil an effective amount of the polymer of claim 1.

23. (original) A method of inhibiting the deposition of paraffin and improving the flow properties of oil comprising adding to the oil an effective amount of the composition of claim 17.

24. (original) The method of claim 23 wherein the oil is crude oil, condensate or middle distillate.

25. (original) The method of claim 24 wherein the oil is crude oil.

26. (original) The method of claim 23 wherein the oil is fuel oil or diesel.

27. (previously presented) A method of inhibiting the deposition of paraffin and improving the flow properties of oil comprising adding to the oil about 1 to about 5,000 ppm, based on polymer actives of the polymer of claim 1.

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28. (previously presented) The method of claim 27 wherein about 10 to about 300 ppm, based on polymer actives of the polymer of claim 1 is added to the oil.

29. (new) A paraffin inhibitor comprising a polymer consisting of

(a) about 65 to about 85 weight percent of one or more C_1-C_{30} alkyl esters of acrylic acid;

(b) about 1 to about 98 weight percent of one or more C_1-C_{30} alkyl esters of methacrylic acid; and

(c) about 1 to about 30 weight percent of one or more unsaturated monomers selected from the group consisting of styrene, vinyl acetate, maleic anhydride, vinyl cyclohexane, vinyl propionate and cinnamic acid C_1-C_4 alkyl esters, wherein the alkyl ester portion of at least one of (a) or (b) is C_{10}-C_{30} alkyl and wherein the polymer has a number average molecular weight of about 1,000 to about 150,000 Daltons.

30. (new) A method of inhibiting the deposition of paraffin and improving the flow properties of oil comprising adding to the oil an effective amount of the polymer of claim 29.